(b) a first high temperature superconducting wire wrapped helically around the core member, where the first high temperature superconducting wire comprises

(i) a first high temperature superconducting component having a first end and a second end;

(ii) a layer of a first nonsuperconducting solder material, a portion of the solder layer attached to at least a portion of the first end of first high temperature superconducting component; and

(iii) a second high temperature superconducting component having a first end and a second end, at least a portion of the first end of the second high temperature superconducting component attached to a portion of the solder layer,

wherein the portion of the first high temperature superconducting component attached to the solder material and the portion of the second high temperature superconducting component attached to the solder material form an overlap segment;

wherein the shape of the first end of at least one of the first and second high temperature superconducting components is adapted to minimize strain concentration of said wires.

5. The cable of claim 1, wherein the first high temperature superconducting wire is wrapped around the core with a constant pitch, and the shape of the first ends of the first and second high temperature superconducting components are adapted to minimize strain concentrations in the first high temperature superconducting wire.

No new matter is entered by any of these amendments. A copy of the amended material with markings to show changes made is included as Appendix A with this response.

Remarks

The claimed invention

The present invention is directed to a superconducting cable containing at least one high temperature superconducting wire wrapped helically around a core member. The high temperature superconducting wire includes two high temperature superconducting components,